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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/530,803 | 06/12/2000 | HERVE CROZIER | 365-444P | 3623 |

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EXAMINER

LEE, RIP A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1713

DATE MAILED: 11/27/2002

11

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-11

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 09/530,803 | Applicant(s) CROZIER, HERVE | |
| | Examiner Rip A. Lee | Art Unit 1713 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

This office action follows a response filed on September 18, 2002. Claims 5-13 were amended, and new claims 14 and 15 were added.

Claim Objections

1. Claim 14 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Vinyl norbornane does not satisfy the limitations imposed in claim 4 wherein R_1 and R_2 together form a 5 or 6 membered saturated or unsaturated or aromatic ring.

The Applicants submit that vinyl norbornane is, indeed, encompassed by the claim, since it contains the requisite six-membered ring. The examiner adds that vinyl norbornane possesses three rings, each of which is elucidated below.



It is understood, in view of recitations vinyl cyclopentane, and vinyl cyclohexane, that present claim 4 requires R^1 and R^2 form a single ring. Claim 4 resounds this notion: "wherein R_1 and R_2 together form a 5 or 6 membered saturated..."

2. Claim 10 is objected to because of the following informalities: In line 8 of the claim, insert the word "propylene" between "nucleated" and "polymer" in order to obviate lack of antecedent basis in the claim. Appropriate correction is required.

3. Claim 11 is objected to because of the following informalities: In line 2 of the claim, insert the word "polymer" between "propylene" and "composition" in order to avoid lack of antecedent basis in the claim. Appropriate correction is required.

4. Claims 11 and 15 are objected to because of the following informalities: Change "process" to "method" so that it is consistent with the language in parent claim 10. Appropriate correction is required.

5. Claim 15 is objected to because of the following informalities: In line 2 of the claim, insert the word "propylene" between "nucleated" and "polymer" in order to obviate lack of antecedent basis in the claim. Appropriate correction is required.

6. Claim 15 is objected to because of the following informalities: Lines 5 and 6 recite the phrase "the shrinkage of which." According to the claim, the antecedent of the phrase is "nucleated polymer" or "coloring pigment." None of these is correct because it is the overall colored polymer composition which displays the claimed shrinkage feature. Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,684,099 to Watanabe *et al.* for the same reasons set forth in the previous office action (Paper No. 9).

Watanabe *et al.* relates to compositions comprising polypropylene polymer. The reference teaches the incorporation of nucleating agents to impart rigidity, heat resistance, and impact strength to the polymer (col. 9, lines 37-39). Preferred examples of nucleating agent include polyvinylcyclohexane and polyvinylcyclopentane (col. 9, lines 50-51) used in amounts of 0.05-0.5 % by weight (col. 9, line 55). According to the inventors, additives ordinarily employed in the field of art, such as a coloring agent, can be added to the composition (col. 10, line 41) in an amount of 0.01-1 % by weight (col. 10, line 63). Examples of coloring agent include carbon black, phthalocyanine, quinacridone, indolin, azo pigments, and titanium dioxide

(col. 10, lines 54-56). Although no single embodiment that encompasses all the claims is shown in the examples of the reference, it would have been obvious to one having ordinary skill in the art to arrive at the claims of the present invention because such an embodiment is adequately provided in the generic disclosure of Watanabe *et al.*

The reference is silent with respect to the particular physicochemical properties recited in present claims 1, 3, 10, and 15. However, a reasonable basis exists to believe that the prior art compositions would exhibit the same properties, especially in view of the fact that the prior art recites essentially the same composition. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Watanabe *et al.* indicates that the compositions are injection molded or they are extruded using a pipe molding apparatus (col. 10, lines 22-25). Thus, it would have been obvious to one having ordinary skill in the art to do the same, since these techniques are taught in the reference.

Finally, regarding claim 13, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See MPEP § 2111.02. There is no indication that the composition of the prior art can not be made into the claimed articles of manufacture. As such, the composition still meets the claims.

10. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,551,501 to Shiga *et al.* in view of Watanabe *et al.*

Shiga *et al.* discloses a polymer composition comprising a blend of crystalline polypropylene and 0.05-10,000 ppm by weight of a vinyl cycloalkane (claim 1). The inventors contemplate the use of additives normally incorporated into polypropylene, such as carbon black and pigments (col. 3, line 50). A specific amount of pigment is not disclosed in any example.

Watanabe *et al.* discloses compositions comprising polypropylene polymer nucleated with polyvinyl cycloalkanes. According to the inventors, additives ordinarily employed in the field of art, such as a coloring agent, are typically used in an amount of 0.01-1 % by weight (col. 10, line 63). Thus, with respect to claims 1, 10 and 15, one having skill in the art would have found it obvious to use the same amount of coloring agent in the composition of Shiga *et al.*, in order to produce a colored polypropylene composition. One would have found it obvious to do so because both inventions relate to similar compositions.

Regarding claims 4, 5, 8, and 9, Shiga *et al.* teach the use of vinyl cycloalkanes selected from vinyl cyclopentane, vinyl cyclohexane, vinyl 2-methyl cyclohexane, and vinyl norbornane (claim 8), and Watanabe *et al.* disclose use of carbon black, phthalocyanine, quinacridone, indolin, azo pigments, and titanium dioxide as coloring agents (col. 10, lines 54-56). Thus, it would have been obvious to use these compounds because they are disclosed adequately in the prior art. In the example of Shiga *et al.*, the vinyl cyclohexane is polymerized first, followed by polymerization of propylene in the presence of vinyl cyclohexane polymer. Note that the prior art process is basically the same as that recited in present claim 6, resulting in the polymer blend

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Note that the prior art process is basically the same as that recited in present claim 6, resulting in the polymer blend described in present claim 7. Regarding claim 12, Watanabe *et al.* indicates that the compositions are injection molded or they are extruded using a pipe molding apparatus (col. 10, lines 22-25). Thus, it would have been obvious to one having ordinary skill in the art follow the same procedures, since these techniques are taught in the references.

The prior art is silent with respect to the particular physicochemical properties recited in claims 1, 3, 10, and 15. However, a reasonable basis exists to believe that the prior art compositions would exhibit the same properties, especially in view of the fact that the prior art recites essentially the same composition. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Finally, regarding claim 13, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See MPEP § 2111.02. There is no indication that the composition of the prior art can not be made into the claimed articles of manufacture. As such, the composition still meets the claims.

Response to Arguments

11. The Applicants traverse the rejection of claims 1-13 under 35 U.S.C. 103(a) as being unpatentable over Watanabe *et al.* The Applicants' arguments have been considered fully, but they are not persuasive.

The Applicants submit that because the prior art does not stress the importance of low shrinkage, dimensional stability, or crystallization temperature, the teachings would not lead the skilled artisan to use the specific composition disclosed in claim 1 of the instant invention in order to get propylene compositions having the desired properties of low shrinkage and improved dimensional stability.

That the skilled artisan does not have the foresight to use the composition to capitalize on the claimed properties is not under consideration here. The claims are drawn to a colored propylene composition nucleated with a polymerized vinyl compound wherein the amount of pigment lies in the range of 0.01-5 wt %. Watanabe *et al.* teaches this composition, and therefore, it is likely that the composition exhibits the claimed crystallization temperature features. The burden of proof was shifted to the Applicants to establish an unobviousness difference, but the Applicants have not met this burden.

In view of this and other discussions, the rejection of record has not been withdrawn.

12. The Applicants traverse the rejection of claims 1-13 under 35 U.S.C. 103(a) as being unpatentable over Shiga *et al.* in view of Watanabe *et al.* The Applicants' arguments have been considered fully, but they are not persuasive.

The Applicants indicate that neither Shiga *et al.* nor Watanabe *et al.* speaks of achieving low shrinkage or improved dimensional stability. Furthermore, the Applicants contend that the examiner is using hindsight to find the instant invention obvious over the cited references.

This is not accurate. It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In this case, Shiga *et al.* discloses a propylene composition nucleated with 0.05-10,000 ppm by weight of a vinyl cycloalkane, and use of pigments is contemplated. In terms of the base composition, the reference is essentially the same as that claimed. Thus, it would also exhibit the claimed physicochemical properties. One having skill in the art, however, would not find any recitation in Shiga *et al.* concerning the amount of pigment to use. As such, one would turn to the literature pertaining to colored polypropylene compositions nucleated with the same nucleating polymer (*i.e.*, Watanabe *et al.*). The skilled artisan, upon reading Watanabe *et al.*, would have found it obvious to add 0.01-1 % by weight of pigment because that amount is disclosed.

Therefore, it is maintained that one would find it obvious to arrive at the present composition in view of the prior art. Apart from generic arguments, the Applicants have not shown why it would not be obvious to arrive at the prescribed amount of pigment. In view of the discussion above, the rejection of record has not been withdrawn.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7064. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

ral

November 25, 2002


DAVID W. WU
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